

10 Little Gibbs Rd.
Malabar Hill
Bombay.
10. Nov. 1938.

Dear Professor Madhava Rao,

Thank you for your kind letter
of the 7th. I am afraid that I have no
reprints with me here in India at all,
and therefore cannot send you any. They
are all in Cambridge.

I shall try and send you
the Solway reports soon, but they are
rather bulky and it might be a few days
before I get them suitably packed.

My coming to Bangalore has not been
finally settled by the Council yet, but should it be passed, I expect to be in
Bangalore for a couple of months from the

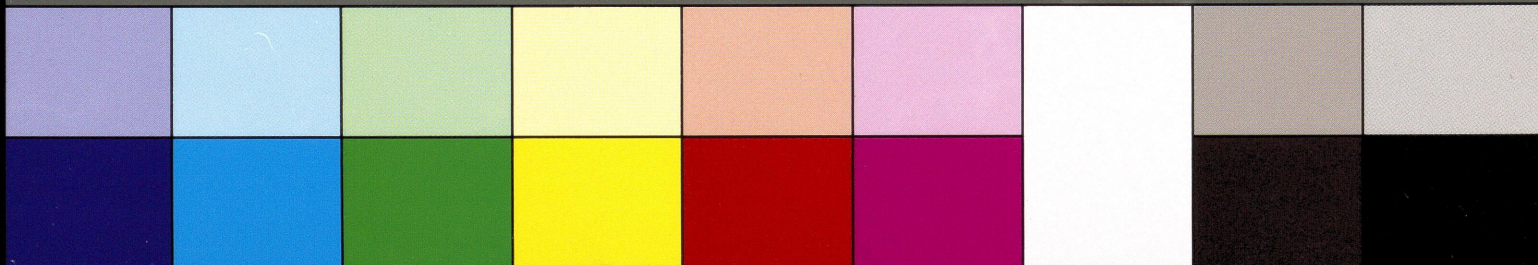
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beginning of January.

In the meantime I would like to draw your attention to the following problem and ask you to let me know if you would care to collaborate with me on it. The problem is to calculate the "Compton effect" of γ -rays on charged mesons. The interaction of mesons with electromagnetic radiation is given in my paper. This problem is rather important for by the Weissaker method, it is directly connected with the Bremsstrahlung. I had put a research student in Cambridge onto the latter problem, and now A.H. Wilson is helping him. But it is extremely complicated. Moreover, the Weissaker method gives one more physical insight into the problem. So it would be very interesting to know the Compton effect. Could you

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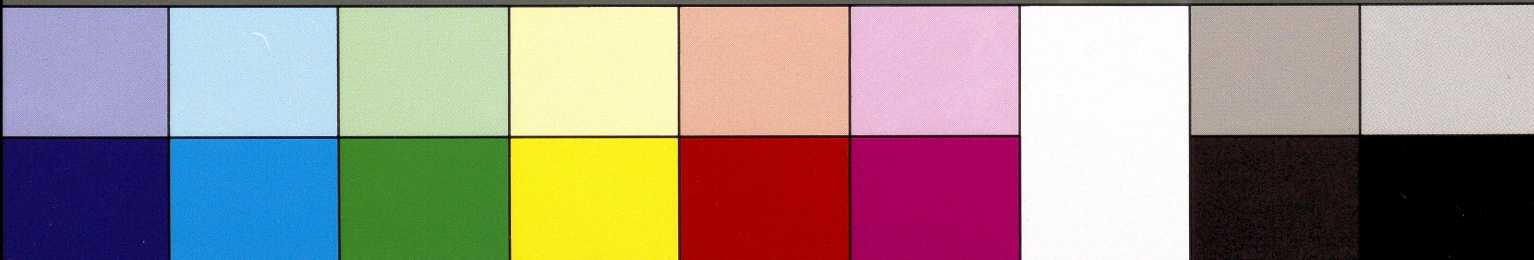
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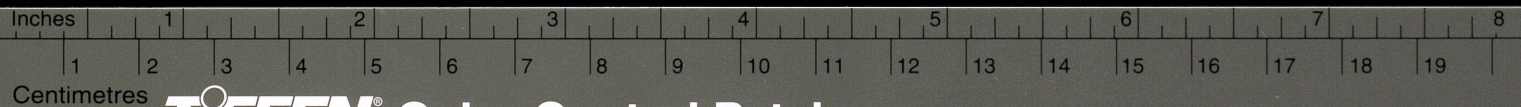
perhaps study this problem and start working
on it. I am at the moment still engaged
in the spinning ^{particle} ~~section~~. I have now reason
to believe that it is wrong to describe protons
by the Dirac equation as far as nuclear theory is ^{concerned}.

Returning to the Compton effect, it
should be noted that a contribution comes
1) by a second order process from the
terms containing e of expression (55) of

my paper, and

2) by a first-order process from the terms
containing e^2 ^{(55) of} of this paper.

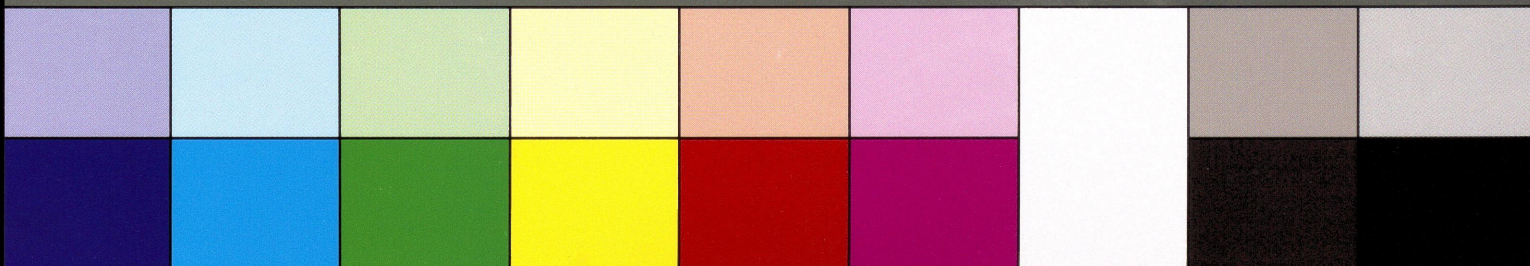
(2) I have heard from America that some
pupils of Oppenheimer have tried ^{the Bremsstrahlung} ~~the~~
problem and find that the radiation loss
increases as E^2 (E energy of meson) whereas
for Dirac particles it increases as E .



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Our Compton effect would give an insight
into this, and show why this happens
(if it is true) In fact this might be
crucial for the reason theory is confirming
or refuting it.

With kind regards

Yr sincerely

H. J. Bhabha

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